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□ *Earth Station Weighs Just 25 Pounds*, (N), Aug, p. 48.

□ *Evolution Of Satellite Communications Traced*, (N), Mar, p. 26.

□ *Experimental Comsat To Fly For ESA*, (N), Sept, p. 36.

□ *FCC Okays SBS Satellite Venture*, (N), Mar, p. 19.

□ *FCC Okays Satellites For Public Broadcasters*, (N), Apr, p. 26.

□ *Five-Year Term Granted For Marisat Satellites*, (N), Feb, p. 20.

□ *4.5-Meter Earth Stations Win FCC Approval*, (N), Feb, p. 19.

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□ *VCO Subsystems: What To Test, How To Test It, Part II*, (TA), July, p. 82.

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